

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference LP2012PC00	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/EP2004/009690	International filing date (day/month/year) 31/08/2004	(Earliest) Priority Date (day/month/year) 01/09/2003
Applicant LONZA AG		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. i.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☒ **Unity of invention is lacking** (see Box III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07D333/20 C07D307/52

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BEILSTEIN Data, CHEM ABS Data, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 03/062219 A (BORGHESE ALFIO ; LILLY CO ELI (US)) 31 July 2003 (2003-07-31) claim 1	1-11
Y	WO 03/061825 A (DSM NV ; TUCKER CHARLES EDWARD (US); JIANG QIONGZHONG (US)) 31 July 2003 (2003-07-31) examples 81-83	1-11
Y	WO 03/061826 A (DSM NV ; TUCKER CHARLES EDWARD (US); JIANG QIONGZHONG (US)) 31 July 2003 (2003-07-31) examples 93-99	1-11
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *Z* document member of the same patent family

Date of the actual completion of the international search

1 March 2005

Date of mailing of the international search report

09. 05. 2005

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	TAKESHI OHKUMA ET AL: "General Asymmetric Hydrogenation of Hetero-aromatic Ketones" ORGANIC LETTERS, ACS, WASHINGTON, DC, US, vol. 2, no. 12, 2000, pages 1749-1751, XP002255184 ISSN: 1523-7060 cited in the application Scheme 1, table 1	1-11
Y	----- SAKURABA S ET AL: "EFFICIENT ASYMMETRIC HYDROGENATION OF BETA- AND GAMMA-AMINO KETONE DERIVATIVES LEADING TO PRACTICAL SYNTHESIS OF FLUOXETINE AND EPROZINOL" CHEMICAL AND PHARMACEUTICAL BULLETIN, PHARMACEUTICAL SOCIETY OF JAPAN. TOKYO, JP, vol. 43, no. 5, 1995, pages 748-753, XP001071298 ISSN: 0009-2363 cited in the application table 1	1-11
A	----- WO 02/10113 A (GEWALD RAINER ;ASTA MEDICA AG (DE)) 7 February 2002 (2002-02-07) claim 2 -----	1-11

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2004/009690

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-11

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-11

Process for the preparation of compounds of formula I

2. claim: 12

Compounds of formula I

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/009690

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03062219	A	31-07-2003	EP 1478641 A1	24-11-2004
			WO 03062219 A1	31-07-2003
			US 2004249170 A1	09-12-2004
WO 03061825	A	31-07-2003	US 2003144521 A1	31-07-2003
			US 2003181318 A1	25-09-2003
			BR 0307120 A	28-12-2004
			CA 2471389 A1	31-07-2003
			EP 1465726 A1	13-10-2004
			EP 1497245 A1	19-01-2005
			WO 03061824 A1	31-07-2003
			WO 03061825 A1	31-07-2003
			WO 03061826 A1	31-07-2003
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			WO 03062181 A1	31-07-2003
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			EP 1465726 A1	13-10-2004
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			WO 03061825 A1	31-07-2003
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			US 2003171213 A1	11-09-2003
			US 2003181318 A1	25-09-2003
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			AU 8763501 A	13-02-2002
			BR 0112773 A	24-06-2003
			CA 2417269 A1	24-01-2003
			CZ 20030191 A3	16-04-2003
			EE 200300038 A	15-10-2004
			WO 0210113 A1	07-02-2002
			EP 1303475 A1	23-04-2003
			HU 0301503 A2	28-08-2003
			JP 2004505104 T	19-02-2004
			PL 358717 A1	09-08-2004
			US 2004030178 A1	12-02-2004